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ABSTRACT

This practicum attempted to promote teacher and student sensitivity to seven mainstreamed, oral, elementary school children with hearing impairments. It also aimed to promote more social interaction between students with impaired hearing and those with normal hearing and to effect a more comfortable transition from a special school to the mainstream school for hearing-impaired students. Inservice training was provided for teachers and normal hearing students concerning hearing loss and its communication correlates. In addition, parent support meetings were held, hearing "buddies" were provided for each hearing-impaired student, and a weekly pragmatics group was held for hearing-impaired students to allow them to practice the appropriate use of social language. Improvement was measured in pre- and post-tests administered to the normal-hearing students and their teachers. Although practicum goals were not achieved, social interactions between hearing-impaired and other students increased by 14 percent over initial observation. Appendices include student and teacher questionnaires, various forms used, and summaries of the three pragmatics groups. (Contains 27 references.) (Author/DB)

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Promoting Successful Mainstream Experiences for Hearing-Impaired Elementary Students through Inservice Training, Peer Mentoring, and Pragmatics Groups

by

Barbara Packer

Cluster 49

A Practicum I Report Presented to the
Ed.D. Program in Child and Youth Studies
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

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PRACTICUM APPROVAL SHEET

This practicum took place as described.

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February 15, 1994

This practicum report was submitted by Barbara Packer under the direction of the adviser listed below. It was submitted to the Ed.D. Program in Child and Youth Studies and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova University.

Approved:

3/17/94
Date of Final Approval of Report

Mary Ellen Sapp
Mary Ellen Sapp, Ph.D., Advisor

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ABSTRACT

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This practicum was designed to promote teacher and student sensitivity to mainstreamed, oral, hearing-impaired elementary school children, to promote more social interaction between hearing-impaired and normal hearing students, and to affect a more comfortable transition from a special services school to the mainstream school for the hearing-impaired students.

The writer conducted inservice training regarding hearing loss and its communication correlates for the normal hearing students and their teachers, held parent support meetings, provided hearing "buddies" for each of the hearing-impaired students, and implemented a weekly pragmatics group for the hearing-impaired students to practice the appropriate use of social language. Each component of the practicum's implementation was conducted by the writer and by graduate speech-language pathology students, under the writer's supervision.

The results of the practicum were positive although projected outcomes were not met. Improvement was measured in pre- and posttests administered to the normal hearing students and their teachers, and social interactions between hearing-impaired and normal students increased by 14% over initial observation.

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CHAPTER I

INTRODUCTION

Description of Community

This practicum was conducted in a large urban community area in southeastern United States, with a population of approximately 150,000. The community is best known as a vacation and retirement center, although there is a large number of working professionals and their families. The practicum was implemented in three of the school centers of a private university. The private university is the second largest in the state, with over 3,600 undergraduate, 6,900 graduate students, and more than 825 law students. The school centers include a private, special services school, an independent primary school, and an independent middle school and high school. The special services school provides educational programming for children aged 2 through 13, whose exceptionalities include those of speech-language impairment, hearing loss, attention deficit disorders, autism, and various learning disabilities. Additionally, children between the ages of birth to three who are hearing impaired may attend the parent/infant therapy program, whose philosophy is an oral approach to communication.

The independent primary school educates students in

grades Pre-K(4) through 5, and the private middle school educates children in grades 6, 7, and 8. There is also a high school for students in grades 9 through 12. The children who attend the private primary and middle school centers are generally from upper middle class families. A substantial tuition is charged to attend the independent school centers of the university.

Each of the school centers cooperates under the leadership of an academic dean and a headmaster. Each individual component of the school center is headed by a director. The special services school is governed by a board of governors, comprised of 18 members, with one member serving as liaison to the university's board of trustees.

Writer's Work Setting and Role

The writer is the Coordinator of Audiology and Aural Rehabilitation in a master's program in speech/language pathology at the university. The program falls within the Center for the Advancement of Education. There are 225 part-time and full-time active speech/language master's students in the program, each of whom completes an academic and a clinical course of study.

The writer is responsible for the development and implementation of academic coursework in audiology, including a graduate audiology course and a graduate aural rehabilitation course. The writer is also responsible for coordinating the clinical audiology program within the

masters program in speech/language pathology. The clinical audiology lab is housed within a center for communications disorders situated within the special services school of the university. The clinical audiology program provides services to the children of the parent/infant program, to the children of the special services school, as well as to the children attending the independent university laboratory schools. The clinical audiology lab also provides services to members of the community for patients of all ages, ranging from birth to geriatrics.

The writer supervises graduate students in their participation in audiology lab and aural rehabilitation services, independently provides services to clients, and coordinates and supervises the other two audiologists in the program. The writer also oversees and trains adjunct audiology supervisors on an as-needed basis. Additionally, the writer is charged with providing liaison services for hearing-impaired students who move between the special services school and other school centers or outreach community services and programs.

Other clinical, supervisory staff at the center for communication disorders include four full time speech-language pathologists and seven part time speech-language pathologists. An additional five full time program professors are responsible for instruction, administration and research in the program.

The writer holds a master's degree in audiology, is certified by the American Speech-Language-Hearing Association, and is licensed by the state. The writer has worked in the field of audiology for 17 years in both clinical and supervisory capacities, and has specialized diagnostic experience with difficult-to-test children, including very young hearing-impaired youngsters, severely mentally retarded children, autistic children, and those with auditory perceptual processing disorders.

CHAPTER II

STUDY OF THE PROBLEM

Problem Description

Many hearing-impaired students become perennial "outsiders", never really becoming an integral part of their mainstream classrooms (Jaussi, 1991). That is, the hearing-impaired students spend more time interacting with each other or with their teacher, or being isolated, and do not initiate or maintain communicative interactions with their hearing peers in a mainstream setting.

If a hearing-impaired student is placed into a mainstream setting for academic or non-academic coursework, the goal of mainstreaming is to provide the special needs student with a positive experience, to include success in academics as well as successful social integration. Since social mainstreaming usually requires self-initiated interactions, it is often more difficult to achieve than academic mainstreaming.

Hearing-impaired students in grades kindergarten through sixth from the special services school are mainstreamed into the nearby independent, preparatory school by grade level, for physical education, music, and in some instances, for art and lunch. The hearing-impaired children

walk with one of their teacher assistants from the special services building to the regular, independent school and are placed into settings for these non-academic courses with age-appropriate, hearing peers. The goal of such a placement is the controlled exposure of hearing-impaired students to hearing students and vice versa to initiate the process of social integration.

The difficulties encountered by the hearing-impaired children included a lack of enthusiasm for the mainstream activities, behavioral difficulties such as refusal to attend the mainstream activities, and an obvious lack of interaction between the hearing-impaired students and the hearing students before, during, or after the mainstream activities. The persons affected included each of the hearing-impaired students, as well as their teachers, teacher assistants, parents, and the normal hearing peers.

The problem had not been resolved as there had not been a systematic program to address the special needs of the hearing-impaired students in the mainstream process. That is, there was inadequate advance preparation of the hearing-impaired students, of the hearing classmates, and the mainstream teachers, administrators, and parents.

The problem was that neither the hearing-impaired students nor the hearing students initiated nor maintained social interactions during mainstream activities, and, in many instances, the hearing-impaired students were

uncomfortable attending the mainstream classes.

Problem Documentation

The existence of this problem was documented by a survey the writer conducted with the five teachers and five teacher assistants at the special services school. Four teachers and four teacher assistants reported behavioral indications of difficulty with the hearing-impaired children attending the mainstream classes. These eight teachers and teacher assistants reported that the children were unhappy when asked to leave the special services building to attend mainstream activities, and that the children often had to be coaxed into attending the mainstream activities.

The problem was also documented by informal interviews with the 12 hearing-impaired students in which 9 indicated that they would prefer not to leave their building. The 9 students reported that they only spoke or played with other special services children and not with the normal hearing children at the independent preparatory school.

The existence of this problem was also documented by the writer's three, 20-minute observations of the 12 hearing impaired children in their non-academic, mainstreamed activities. During these observations, the writer noted interaction mainly between other hearing-impaired or special services students or the mainstream teacher, and not with their hearing peers.

Causative Analysis

Literature (Antia, 1982; McKalip, 1979) regarding the mainstream process of hearing- impaired students stresses the importance of a comprehensive preparation program prior to mainstreaming. Preparation, as described in the literature, is not a part of the mainstream process at the special service and regular schools.

One factor related to the cause of the problem was inadequate advance preparation of the hearing students regarding the special needs and communication skills of the hearing-impaired students with whom they would be interacting. Without adequate preparation, these hearing students would not be equipped to understand the communication skill levels of the hearing-impaired students, the purpose of the hearing aids or other assistive devices, or what constitutes difficult listening and communication situations for the hearing-impaired students.

Another factor related to the cause of the problem was inadequate preparation of the teachers, staff, and administrators regarding hearing loss, hearing aids, and communication skills of the hearing impaired. Regular education teachers and staff may never have had the opportunity to interact with, much less instruct, a hearing-impaired student. The teachers' and staff's lack of familiarity with the impact of hearing loss on communication or the use of hearing aids and other assistive devices would

make it difficult for them to maximize the listening potential of the hearing-impaired students in their classrooms. As a result of this lack of familiarity, the teacher and staff were not able to provide an optimal role model for the hearing children to emulate much less meet the academic and social needs of the students.

A third factor related to the cause of the problem was inadequate preparation of the hearing-impaired students regarding methods to maximize their communication skills with the hearing children and during instruction. Since the degree of oral skill proficiencies varied among the 12 hearing-impaired students, there were varying degrees of difficulties in making their speech understood. However, many of the hearing-impaired students had pragmatic difficulties as well, which interfered with their ability to socially interact, even on a non-verbal level.

The last factor related to the cause of the problem was a general lack of understanding regarding hearing loss and its effect on most aspects of behavior. This lack of knowledge resulted in inadequate sensitivity to the needs of the hearing-impaired children in the educational setting, and in their ability to interact with their hearing peers. Without a formalized, cooperative effort designed to enhance staff, student and parent sensitivity to the difficulties facing the hearing-impaired student in their mainstreaming efforts, or any formal training designed to increase

sensitivity in teacher and student attitudes to the hearing-impaired mainstreamed students, a successful mainstream experience for hearing-impaired students is not likely to succeed, and may even be a very negative, counter-productive experience for all involved.

Relationship of the Problem to the Literature

The literature (Antia, 1982; Levy-Schiff & Hoffman, 1985; Raimondo & Maxwell, 1987) is replete with numerous reports of problems in the successful mainstreaming of hearing-impaired children. Many professionals (Johnson, Johnson, & Maruyama, 1983; Odom & McEvoy, 1988) have written that while a goal of mainstreaming is to integrate special needs children with their "normal" peers, most hearing-impaired and normal hearing children resegregate once they leave the academic classrooms and enter non-academic activities. In essence, well-intentioned professionals create a segregated group of students within a mainstream setting and, in so doing, lay the groundwork for social ostracism.

Antia (1982) reported that there was little social interaction between partially integrated hearing-impaired students and their normal hearing peers, and more interaction between the hearing-impaired students and their teacher, or among the hearing impaired students themselves. Antia studied 32 hearing-impaired students and 84 hearing children in grades one through six in urban school settings.

He found that the physical act of mainstreaming did not promote social interaction between the hearing-impaired and the normal hearing students. He also noted no significant difference between results for children using a total communication method (sign language) or for children using oral communication.

Studies of preschoolers also revealed difficulties with mainstreaming. Levy-Schiff & Hoffman (1985) studied 36 hearing-impaired Israeli preschoolers with varying degrees of hearing loss. Free play interactions were observed and behaviors related to social competence and interactional ability. The authors found that those with greater degrees of hearing loss tended to segregate themselves more in comparison to those preschoolers with less hearing loss or with normal hearing. The theoretical suggestion posed by this study is that social function and interaction ability is related to the degree of the hearing loss.

Regardless of degree of hearing loss, however, there are reports that significantly fewer interactions were made between hearing-impaired and normal hearing preschoolers in a structured language group as compared to a free play situation (Brackett & Henniges, 1976). The authors observed 13 hearing-impaired children enrolled in an integrated preschool. The preschool program consisted of language activities as well as free play activity time. The program promoted, but did not force peer interaction. During

observations, interactions in free play time significantly exceeded those in structured language time. The implication is that students with hearing impairment were at a deficit in comparison to hearing children when placed in a situation in which verbal communication was required.

Other studies supported the existence of a mainstreaming problem associated with hearing-impaired primary, middle and high school level students. Raimondo & Maxwell (1987) looked at interactions between 20 hearing-impaired students and their teachers and hearing peers. Their findings supported only minimal self-initiated interaction with teachers and/or peers. The writers indicated no significant difference in the patterns of interactions regardless of mode of communication, although speech (oral communication) was used primarily by these mainstreamed junior and senior high school students.

Kennedy et al. (1976) did a longitudinal study of peer acceptance and self-perceived status of mainstreamed hearing-impaired students. The authors studied 16 hearing-impaired, elementary school children with varying degrees of loss. The hearing losses ranged from moderate to severe and profound. A part of the study revealed that the hearing-impaired students relied on their teachers for successful social interactions, while the hearing students relied on their peer group.

Teachers at the grade school level may have more

positive mainstreaming experiences with older children in higher grades than those working with younger hearing-impaired children. The less positive experience with a younger hearing-impaired child may be related to a more difficult communication situation arising from the more limited language competencies of the younger hearing impaired children (Kolzak, 1983).

Chorost (1988) surveyed 17 regular classroom teachers who had worked with 6 different oral hearing-impaired children over a six year time period. The findings supported less positive experiences for the teachers of hearing-impaired children in grades kindergarten through two, and more positive feelings about mainstream experiences with children in grades three through six. It is not surprising that those teachers working with the younger hearing-impaired students would have a more difficult task because of greater deficits in the expressive and receptive language, the general intelligibility of their speech, and the pragmatics skills of the younger hearing-impaired children.

Even at high school and college age, hearing-impaired students continue to describe problems in their mainstream education experiences. These problems were often described in psychological terms, including withdrawal, social isolation and loneliness.

Murphy & Newlon (1987) reported on loneliness and the

mainstreamed hearing-impaired college student. The writers used 170 hearing-impaired volunteer participants who completed the revised UCLA Loneliness Scale. These students were registered at eight mainstream colleges or universities in the United States. The authors found a significant difference between the hearing-impaired students and their hearing peers as measured by this instrument. That is, the sense of social isolation was much more evident based on the scale with hearing-impaired students, in comparison to their hearing classmates at the college level. There was no difference measured between deaf and hard of hearing students, or between those using oral versus total communication modes.

Some researchers have used interviews with hearing-impaired high school, college, and post-secondary school students to ascertain additional information about the problem of mainstreaming hearing-impaired students. Some interviews revealed that academic mainstreaming was easier for the hearing-impaired student than social mainstreaming (Foster, 1988; Foster, 1987). In the first study, the writer interviewed 25 graduates of the National Technical Institute for the Deaf, and in the second study, she interviewed 15 first year students at the same university. The graduates and students discussed obstacles to academic success and feelings of social isolation.

A review of the literature revealed a number of

different causes of the problem of successfully mainstreaming the hearing-impaired student. These causes included negative attitudes toward the hearing-impaired, insufficient support for mainstream teachers and normal hearing students, and inadequate social, pragmatic or oral skills of the hearing-impaired students.

General causes for hearing-impaired students becoming "outsiders" in a mainstream classroom were cited as including family dynamics, teacher attitudes, and lack of interactions between hearing-impaired and hearing children (Jaussi, 1991). These issues can lead to a sense of psychological isolation from the group, and can detract significantly from the promotion of a positive mainstream experience. It appeared that there were at least three groups of people cited in this study as potential detractors from enhancing mainstream success: parents (and other family members), teachers, and hearing classmates.

Twenty mainstreamed hearing impaired students in postsecondary schools indicated three main reasons for a negative experience. These were inability to communicate with the teachers, inadequate support services, and limited opportunities for social interaction with peers (Walter et al., 1987). These authors noted two similar causes and concerns as outlined by Jaussi (1991); specifically, the hearing peers and the teachers.

Issues described by older hearing-impaired students are

not unlike those facing students in grades kindergarten through sixth. Antia (1992) indicated that insufficient support is given to mainstreaming hearing-impaired children by teachers, administrators, parents and the community. Without support, the hearing-impaired children would have difficulty meeting the challenges of the mainstream placement and may be unaware of a knowledgeable, specific person to whom they might turn with questions, problems or special issues.

McKalip (1979), Mott et al. (1987), and Antia (1982) cited inadequate planning as a factor in preparing hearing students to accept a handicapped youngster into the mainstreamed classroom. McKalip (1979) wrote that lack of time for planning and implementing mainstreaming programs was a major cause for failure, and also cited the need to reduce labelling special needs children to avoid stereotyping students. Mott et al. (1987) described a lack of attention to planning which included preparing the normal children as a shortfall in promoting successful mainstreaming. Antia (1982) cited lack of planning in the realm of carefully arranged situations which would promote integration between hearing and hearing-impaired students as an issue. These shortcomings included inadequate planned situations to encourage and increase social interaction between hearing-impaired students and their normal hearing peers as well as inadequate attention to simple techniques

for bridging any possible communication barrier.

McCloskey & Quay (1987) reported that many teachers have negative attitudes towards mainstreamed handicapped students, in general, which, in turn, influence their students. The teacher is perceived by his students as a role model, and a negative attitude is quickly recognized and emulated by students. Thus, teachers need to be aware of their own perceptions and attitudes toward mainstreaming special needs children, which might adversely affect his students' attitudes toward the mainstreamed child.

Another cause contributing to unsuccessful integration is the inadequate social skills found in some mildly handicapped stu ents, which can interfere with successful mainstreaming (Cullinan et al., 1992). Hearing-impaired students often have pragmatic difficulties, which certainly would increase the likelihood of problems integrating with normal hearing children. That is, hearing-impaired children with varying degrees of hearing loss often have difficulty with the correct social use of language, including verbal and nonverbal components. These difficulties lead to uncomfortable communicative situations between hearing-impaired students and their normal hearing peers.

A final cause contributing to difficulties with mainstreaming is poor oral communicative skills of some hearing-impaired students (Brill, 1975). Since oral skills include listening, speechreading, speech and spoken

language, a problem in any one of these areas obviously may have an effect on communicative interaction and thereby adversely affect social interaction.

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Goals and Expectations

The following goals and outcomes were projected for this practicum: to improve teacher and student sensitivity to the mainstreamed hearing-impaired children, and to design and implement a program for mainstreaming that will foster acceptance of the mainstreamed hearing-impaired student. The writer expects that the hearing-impaired students will increase their social interactions with their hearing peers during mainstream activities. The writer also expects to achieve a more comfortable transition from the special services school to the mainstream school for the hearing-impaired students and their teachers and teacher assistants.

Expected Outcomes

At the end of the implementation period, there will be specific measurable and observable outcomes of this practicum. First, it is expected that 100 normal hearing students, after training, will correctly respond "yes" (or offer the preferred response) to 70% of the questions on a 10-item posttest regarding hearing loss and hearing aids.

A second outcome of this practicum is that, at the end

of the implementation period, all five teachers will respond "strongly agree" to 7 of the 10 items on a posttest about hearing impairment and mainstreaming the hearing-impaired.

A third outcome of this practicum is that, following implementation of the program, social interaction between the hearing-impaired and the normal hearing children will be increased by 50% when 20-minute pre- and post-practicum observations of the nine hearing-impaired children are compared.

Measurement of Outcomes

The first outcome of the practicum was measured by the use of a written test that was designed and administered to the normal hearing children by the writer (see Appendix A). The student questionnaire was composed of 10, yes/no questions. The test was administered pre- and post-implementation. For the younger children who were non-readers, the questionnaire was administered orally by the writer, assisted by a graduate speech/language master's student. Children who were able to read filled out the questionnaire independently.

The second outcome of the practicum was measured by the use of a written test, that was designed and administered to the mainstream physical education and music teachers (see Appendix B). This teacher questionnaire was comprised of 10 questions, with responses ranging from strongly agree to strongly disagree. The questionnaire was administered pre-

and post-implementation by the writer, assisted by a graduate speech-language master's student.

The third outcome was measured through analysis of a 20-minute observation of the hearing-impaired children in their mainstream activity. Observations of each hearing-impaired child were made by the writer or by graduate students in speech-language pathology. The pre- and post-implementation observations were recorded on a Pragmatic Observation Log (see Appendix C).

The Pragmatic Observation Log was developed originally by one of the speech-language pathology supervisors in the speech-language master's program. The log consisted of four different areas related to the use of pragmatics, including affect pragmatics, spoken linguistic skills, information conveyed utilizing spoken language, and the use of language effectively in a variety of situations. Each area is sub-divided into five specific objectives. The responses observed were graded a "0" response (no opportunity to observe), a "1" response (inconsistent), a "2" response (emerging appropriate response) and a "3" response (appropriate response - skill intact). There was an additional area to record other behaviors that were observed, particularly if the behaviors impacted on the interactions among the hearing-impaired students and the normal hearing students.

CHAPTER IV

SOLUTION STRATEGY

Discussion and Evaluation of Solutions

The problem addressed by this practicum was that neither the hearing-impaired students nor the hearing students initiated nor maintained social interactions during mainstream activities, and in many instances, the hearing-impaired students were uncomfortable attending mainstream classes. This problem led to negative mainstream situations and experiences for hearing-impaired students.

The literature offered numerous suggestions for solutions to the problem related to negative mainstream experiences for hearing-impaired students. The solutions had proven to be effective if the implementation was systematic and implemented prior to the inclusion of the hearing-impaired child in the mainstream setting.

Implementation of an inservice training program for staff and students prior to the inclusion of the hearing-impaired child in the mainstream classroom is one solution. McKalip (1979) indicated that the training program should target teachers, children, and administrators and should focus on the development of empathy toward the hearing-

impaired. The program must include an opportunity for all involved to examine attitudes, feelings, and actions regarding a handicap. This comprehensive program included steps in identifying similarities and differences among people, the use of applying feeling words to themselves in personal situations, and lastly activities developed to identify feelings in other people. The use of a counselor in a leadership role in the program was stressed.

The idea of an inservice training program was also addressed by Mott et al. (1987). These authors detailed the provision of a general awareness training program for teachers and students which should include information about the specific handicap and the need to model appropriate behavior with the handicapped youngster for the normal students. Activities utilized by these authors included simulations, class discussions, the use of meaningful videos, participation in role play, and problem solving activities. These activities were felt to be useful in increasing knowledge about the specific handicap and were helpful in providing models of appropriate behavior.

Mainstreaming hearing-impaired students with success necessitates the provision of training programs as an integral part of the solution. Timing for these training programs was critical, and involved presentations by knowledgeable professionals early in the school year. LeBuffe (1987) indicated that there are specific

responsibilities to be shouldered by each participant in the mainstream process, if it is to be successful. A partial solution offered by this author was to hold meetings early in the school year which included the hearing-impaired student, the classroom teacher, the teacher of the hearing-impaired and any interpreters. The purpose of such a meeting was for each participant to review his role and to compile a written summary of the meeting for future use. These meetings would mold a partnership to enhance success.

Another solution critical to positive mainstreaming of the hearing-impaired student was to carefully prepare the hearing students prior to the inclusion of the hearing-impaired child in their classroom. Roman et al. (1987) suggested the advance preparation of the hearing children in the primary school grades, and suggested the need to give all children equal attention once the initial transition period had passed. If the hearing-impaired student received undue attention from the teacher, the hearing children may react negatively.

The literature also documented the importance of parental input to the mainstreaming process. Hearing-impaired children with mothers who expect them to succeed in mainstreaming, and who have positive attitudes toward the mainstreaming process, are more likely to have a successful mainstreaming experience (Teller & Lindsey, 1987). These writers examined parental factors such as joint attitudes

toward the child's exceptionality, the level of interest and input to the educational activities, parental participation and income level. It was not a surprise that when all parental factors are positive, the hearing-impaired child was a successful mainstreamed youngster.

Networking with other hearing-impaired students as well as a formal professional support system was cited as a key ingredient in a positive mainstreaming experience for the hearing-impaired. Foster (1987) conducted interviews with 15 first-year students at the National Technical Institute for the Deaf at Rochester Institute of Technology. The interviews were aimed at ascertaining methods utilized by these students to overcome difficulties in their mainstream high school classes. These students targeted the need for formal and informal self-directed strategies to succeed in the mainstream. These strategies included networking with hearing and hearing-impaired students, using professional support services, informing their teachers of their hearing deficit and asking for extra help after class.

Foster (1990) offered an ecological model for the explanation of successful interactions among hearing-impaired college level students and hearing students in a residence dormitory. This model suggested solution strategies which included the use of good communication skills among the students, a sense of knowledge about each other (to include good feelings and attitudes toward a

student with a hearing loss), and the importance of physical proximity of all students on a routine basis.

The incorporation of a sociological model into the mainstreaming process has been discussed by other authors. Lee and Antia (1992) detailed the provision of such a model which included providing situations for cooperative learning and interaction, the avoidance of competitive activities, and the emphasis of all students retaining equal status, and thereby avoiding preferential treatment for the hearing-impaired students. The model stresses that acquaintance lessens prejudice, so that when different groups become well-acquainted, there will be a lessening of strained interactions.

The idea of equal treatment for all students, hearing-impaired or not, may be difficult for well-meaning teachers to achieve. When a student is floundering because of an impairment, it is not unusual for teachers to funnel their energies into giving extra attention to that student. The literature supported the notion of provision of equal treatment and equal opportunity for all students in a positive mainstream situation. The need for teachers to create multiple opportunities for social interaction between the hearing-impaired and normal hearing children is an important part of successful interactions (Antia, 1985; Antia, 1982).

Another partial solution to the successful

mainstreaming experience for the hearing-impaired student was to establish a peer tutoring program, and/or a "buddy" program to aid the hearing-impaired child (Phelps et al., 1987; Tillona, 1986). Phelps et al. (1987) defined a peer-buddy as on who accompanies and guides a peer in nonacademic, noninstructional activities. The peer-buddy is an equal and a companion. These writers described a peer-buddy system which is successful based on the time supplement to the handicapped child, and the improvement in social knowledge and friendship skills fostered.

Tillona (1986) utilized a peer-tutoring system as part of an eclective approach to mainstreaming. The peer tutor was a responsible and caring child from the regular class who was chosen by the teacher to tutor the special education student. Tillona found that the peer tutoring component increased the handicapped student's success both academically and socially.

The ideas described above could be augmented by the availability of a communication center that would include the services of hearing resource teachers, speech-language pathologists, audiologists and a "hearing buddy" for classroom activities (Robinson, 1984). This combination approach used professionals and classmates to support and encourage the hearing-impaired student. The teamwork involved in supporting the regular education teacher working with a mainstreamed hearing-impaired child was highly

successful.

A teacher of the hearing-impaired who consults with the regular education teacher was another partial solution to the problem. The teacher of the hearing-impaired must observe in the regular classroom, and then provide consultative support to the classroom teacher on a routine basis (LeBuffe, 1987). The teacher of the hearing-impaired made valuable suggestions to the regular classroom teacher using notes obtained during observations, and provided specific recommendations about situations which occurred.

Luckner (1988) documented the need for resource teachers serving mainstreamed hearing-impaired students to make use of a weekly progress form as a means to provide better communication to regular classroom teachers. The form used should document academic progress, specify problems that have emerged, and indicate the need for conferences. This form provided the documentation necessary for clarifying issues and identifying potential solutions.

All of the preceding suggestions for solutions to enhance the mainstream experience involved the teachers, the hearing classmates, special teachers, speech-language pathologists, audiologists and parents. It is clear, however, that the hearing-impaired student must also be targeted to receive information and support prior to inclusion in the mainstream classroom setting or activity.

Language skills of the hearing-impaired student must be

considered before a mainstream placement is undertaken. Kolzak (1983) reported that the language assessment of the hearing-impaired student before mainstreaming must include recommendations for any needed modifications to be addressed. The speech-language pathologist who assesses the hearing-impaired student must target deficient areas with goals and objectives in language areas to include: receptive and expressive, pragmatics, intelligibility. These must be addressed in individual or group therapy with input from the regular classroom teacher about specific new vocabulary used in class.

An area of language that is critical for successful mainstreaming is pragmatics, or the use of appropriate social discourse skills, including topic maintenance, turn-taking in conversation, and using socially appropriate topics. Cullinan et al. (1992) stipulated that hearing-impaired students must be taught these social skills and that classroom relationships must be addressed if the student is to make the most of his classroom opportunities. Without appropriate use of social language, the hearing-impaired child would be ostracized from his normal hearing peers.

Cullinan et al. (1992) believed that the inclusion of obtaining frequent feedback from all participants in the mainstreaming effort was critical to its success. Monthly meetings were utilized to obtain information regarding

positive and negative experiences of the hearing-impaired students, the hearing students, and the teachers and teacher-assistants. Feedback obtained during these meetings helped to determine issues to address in parent meetings, in pragmatics group meetings and in buddy meetings.

Description of Selected Solution

Many of the solutions offered in the literature could be implemented with the designated population in the writer's work setting, and in the specified three month implementation time period. These solutions were incorporated into the writer's plan to improve the mainstreaming process for the hearing-impaired student.

The solution strategy selected by the writer was comprised of the following components: inservice training early in the school year for classroom teachers and teacher assistants; workshops for the hearing children; the use of hearing buddies for each of the hearing-impaired students; meetings for the parents of the hearing-impaired students; and pragmatics groups for the hearing-impaired students. Each component of the solution strategy was implemented by the writer, assisted by five graduate students enrolled in the university's master's program in speech-language pathology. The experience provided the graduate students with clinical clock hours in the area of aural rehabilitation as required by the American Speech-Language and Hearing Association.

The inservice training program for teachers and teacher assistants focused on hearing loss, hearing aids, assistive devices for the hearing-impaired, the impact of hearing loss on communication, and methods to utilize to maximize the hearing-impaired children's abilities to communicate. The writer explained each child's audiogram and individual hearing aids, including benefits derived from each child's individual amplification system. Other components of the program included sensitivity and empathy training. The writer addressed the use of sociological models as set forth by Foster (1990), Lee & Antia (1992), Antia (1982), and Antia (1985).

Foster (1990) described four characteristics as significant in producing interactions. These included communication skill of the hearing-impaired student; self-knowledge and knowledge of one another; the understanding of one's feelings and attitudes toward the hearing-impaired, and specific environmental concerns including issues related to noise reduction. The writer of this practicum addressed each of these components in the sensitivity and empathy training sessions.

Lee & Antia (1992) suggested that the rules for successful integration of hearing-impaired children were not different from those utilized by others in successfully mainstreaming members of various racial or ethnic groups. These writers stressed the need to incorporate the ideas of

contact theory to include creation of cooperative learning situations, sustained interactions, and sensitizing classmates that children with different abilities may be quite similar in numerous ways. The writer of this practicum addressed these ideas in the teacher inservice training sessions as well as in the normal hearing children's inservice training sessions.

Workshops for the hearing children, as described by Roman et al. (1987), were conducted early in the school year. The children who participated in the training sessions were students in grades 1 through 5. The writer addressed issues related to sensitizing the normal hearing children to hearing-impairment. The children had the opportunity to experience varying degrees of hearing-impairments using hearing loss simulations, as recorded on records, and were able to listen to speech and noise via a hearing aid. The hearing children were given information about how best to communicate with a hearing-impaired classmate, in various listening situations.

Hearing buddies were chosen by the teachers for each individual hearing-impaired child. These buddies were trained to help their hearing-impaired classmate by repetition of important instructions, when necessary and were the designated peer mentor, as needed. The buddy system followed the model described by Robinson (1984).

Another component to the solution strategy was a

monthly meeting for parents of the hearing-impaired students. The need for positive parental support for achieving mainstream success is well-documented (Teller & Lindsey, 1987). This once a month meeting was conducted by this writer as a source of information for the parents, as well as to serve a support function. The parent meeting was attended by the writer, the graduate students in the speech-language masters program who had conducted the weekly pragmatics groups, the special services school guidance counselor, and the coordinator of the hearing impaired programs of the special services school.

Three pragmatics groups were held on a once weekly basis for all of the hearing-impaired students. The groups were divided into youngest hearing impaired children, aged six and seven; the middle age group, aged eight through ten years; and the oldest group, aged eleven through thirteen. These group meetings provided models for good social use of language, and provided practice for the hearing-impaired children in appropriate classroom behavior.

This writer felt that there was a need to approach successful mainstreaming through effective inservice training, by providing hearing buddies, and by holding pragmatics groups for the hearing-impaired children. Each component helped to achieve the framework necessary to positively effect change in improving the acceptance of the mainstreamed hearing-impaired child. Appropriate

sensitivity training reduced the negative attitudes of the normal hearing children and their teachers towards the hearing-impaired students. The writer believed that lack of understanding of the impact of hearing loss on communication created a barrier to successful mainstreaming.

By creating a partnership of all involved in the mainstreaming process, it was hoped that this program would be maximally effective. Therefore, the writer included the teachers, the teacher assistants, administrators, parents, hearing and hearing-impaired students in each of the components of the solution strategy. The audiologist serving as team leader assisted by graduate speech-language clinicians provided the support of a knowledgeable professional to whom students, teachers, and parents could turn for support and information.

Report of Action Taken

The solution strategy for this practicum began after receiving approval to implement the proposal from the practicum advisor. Once this approval had been achieved, the writer alerted each of the directors responsible for the special services school, the independent primary school, and the independent middle school that the writer had obtained approval for implementation. The writer also alerted the director of the masters program in speech/language pathology that approval for implementation had been achieved, and that

graduate students would be assigned to this project. Copies of this practicum proposal were distributed to each of these directors and to the graduate students involved in the project.

Each parent of a hearing-impaired child was contacted prior to implementation, to discuss the implementation of this practicum, and to obtain a signed permission form for their child to participate in the practicum (see Appendix D). Each parent was also informed about the parent support group sessions to be held during each month of implementation. Parent meetings were held in one of the conference rooms at the special services school in the evening, in order to allow working parents to attend.

Prior to implementation, the writer obtained copies of the hearing-impaired children's schedules for mainstreaming activities, a list of the regular teachers and teacher assistants who would be working with each hearing-impaired child, and a listing of the hearing children who would be integrated with the hearing-impaired children.

A list of recommended hearing buddies was obtained for each hearing-impaired child, prior to implementation. The parents of the hearing buddies were contacted to inform them of the purpose of the practicum, and to obtain a permission slip for each hearing buddy (see Appendix E). The parents were also notified of the three buddy meetings to be held during each month of implementation.

The speech-language graduate students who assisted in the implementation phase of the practicum were identified, and informed of the schedule for the implementation phase of the practicum. The clinical coordinator of the speech-language graduate program was given scheduling information so that rooms and times were allotted for the pragmatics groups for the hearing-impaired students during the implementation phase of the practicum. One of the therapy rooms in the speech-language clinic was utilized for the pragmatics groups meetings.

A meeting was held early in the school year with the teachers and teacher assistants in the special services school to inform those with hearing-impaired children in their classroom of the purpose of the practicum, and of any scheduling requirements for the hearing-impaired children to attend the pragmatics groups.

Once all permissions were obtained, and information was given to all participants regarding the purpose of the practicum and each of its components, the steps the writer took to implement the practicum included the following:

First, pretests were administered to the regular teachers and the hearing students prior to the first week of implementation (see Appendices A and B).

Second, the speech-language graduate students were trained to observe interactions among the hearing and hearing-impaired students using the Pragmatics Observation

Form (see Appendix C). The first 20-minute observation took place during the first week of implementation.

Inservice training was conducted by this writer to the regular teachers and teacher assistants regarding hearing loss, hearing aids, assistive devices, and the effect of hearing loss on communication during one session in each month of implementation.

Inservice training was conducted by this writer to the hearing children in their individual classes during one session in each month of implementation. This training included information on hearing loss, hearing aids, and methods to maximize communication with a hearing-impaired child. The children listened to a record that simulated varying degrees of hearing loss, and listened to speech in the presence of background noise. Each child had the opportunity to listen to a hearing aid via a stethoscope. The children were exposed to diagrams of the ear, and were given information about how we hear and process speech.

Three pragmatics groups met once weekly with the younger, middle, and older hearing-impaired children. The sessions were organized and goals and objectives were chosen by this writer. Two graduate speech-language pathology students were assigned to each group, and were supervised by this writer. Training was given by the graduate students to the hearing-impaired students in appropriate social interaction during ongoing weekly sessions in the 12-week

implementation phase of the practicum. The calendar which follows detailed the targeted activity for each pragmatics group meeting.

The writer organized and conducted three, once monthly "rap" sessions with the hearing "buddies" to address problems and successes in mainstreaming, using a peer mentoring system. These meetings occurred once each month during the implementation phase of the practicum.

The writer organized and supervised three, 20-minute observations of the interactions between hearing and hearing-impaired students in the mainstream activities of physical education and music, once monthly during the implementation phase of the practicum. The speech-language graduate students maintained a log of their observations using the Pragmatics Observation Form (see Appendix C).

Final posttests with the hearing children (Appendix A) and their teachers (Appendix B) were administered after the 12 week implementation period. Final interviews with the hearing-impaired students and their teachers were conducted after implementation. These interviews focused on the perceived positive and negative impact of this practicum on mainstreaming the hearing-impaired children.

The timeline for implementation of this practicum was a 12-week period at the beginning of the school year. The objectives for each weekly pragmatics group were as follows: (a) establishing eye and facial contact as well as personal

space issues; (b) use of appropriate facial expressions, use of gestures and body posture to match spoken communication; (c) adjusting language to the register of the speaker; (d) choice of appropriate and relevant topic; (e) initiating, maintaining and terminating a conversation; (f) making appropriate topic shifts; use of conversational turn-taking with appropriate interjections; (g) asking and answering questions appropriately; (h) giving and following directions and providing sufficient information; (i) sequencing information appropriately; (j) requesting information for clarification or repair; (k) use of language to verbalize a problem and predict an outcome; and (l) the appropriate use of language to express needs and feelings. A summary of each of the three pragmatics groups appears in Appendixes F, G, and H.

During the three-month implementation phase of this practicum, one significant deviation from this writer's plan was encountered as well as some significant scheduling difficulties. Originally, all nine hearing-impaired students were to participate in each phase of the project, including the assignment of hearing buddies and the inservice training of the hearing classmates and teachers. The two oldest hearing-impaired children were included in the pragmatics groups only, and did not participate with a hearing buddy at the middle school level. This decision was made with input from classroom teachers, the special

services school guidance counselor, and one student's psychologist, after the students refused to participate. This decision changed the number of participating teachers from five to three, as the physical education and music teachers from the middle school were not included. The total number of hearing students who participated in pretest and posttest questionnaires was reduced from 100 to 92 because of absenteeism.

Scheduling difficulties included interference from special events such as Halloween parties, Thanksgiving presentations, and field trips which were not anticipated at the outset by this writer, and forced changes in scheduled observations and inservices.

One other change from the original plan was made. Instead of grouping all of the hearing impaired children into one pragmatics group, this writer decided to provide pragmatics remediation into three small groups. After initial observations and informal language assessments, it was determined that the groups would be best served by placing three hearing-impaired students of similar age and language capabilities into one of three groups in order to provide more age-appropriate materials and language-appropriate levels to each group (see Appendixes F, G, and H).

CHAPTER V

RESULTS, DISCUSSION, AND RECOMMENDATIONS

Results

The problem that existed in this writer's work setting was that neither the hearing-impaired students nor the hearing students initiated nor maintained social interactions during mainstream activities, and that the hearing-impaired students from the special services school were uncomfortable attending mainstream classes at the nearby, regular private school.

The solution to the problem was to establish a formal program of inservice training regarding hearing loss and its communication correlates for the normal hearing children and their teachers; to establish a hearing buddy system for each of the hearing-impaired students; to establish monthly parent meetings for disseminating information about the mainstreaming project and for mutual support; and to establish once weekly pragmatics group training sessions for all of the hearing-impaired students.

The first outcome of the practicum was that it was expected that 100 normal hearing students, after training, would correctly respond "yes" (or offer the preferred

response) to 70% of the questions on a 10-item posttest regarding hearing loss and hearing aids.

This outcome was not met. Nine of the 92 participating normal hearing students achieved a score of 70% or better on the 10-item posttest (see Table 1). On the pretest, only 3 normal hearing students achieved a score of 70% or better. A general trend was noted in greater numbers of students achieving a higher score on the posttest as compared to the pretest, although the projected outcome of 70% was not met.

The second outcome of the practicum was that, at the end of the implementation period, three teachers would respond "strongly agree" to 7 of the 10 items on a posttest about hearing impairment and mainstreaming the hearing-impaired.

This outcome was not met. Table 2 provides an illustration of the results for this outcome. For 6 of the 10 items, the three teachers responded strongly agree or agree; an improvement over the pretest questionnaire.

The third outcome of this practicum was that, following implementation of the program, social interaction between the hearing-impaired and the normal hearing children would be increased by 50%, as measured during a 20-minute pre- and post-implementation observation.

This outcome was not met. Table 3 provides an illustration of the results for this outcome. The average increase was 14% over the pre-implementation observation, or

Table 1

Comparison of Pretest and Posttest Scores Obtained by 92 Normal Hearing Students

	Pretests	Posttests
Score	Number of Students	Number of Students
0	4	0
10%	14	10
20%	37	15
30%	13	15
40%	13	19
50%	5	17
60%	3	14
70%	3	7
80%	0	2
90%	0	0
100%	0	0

Table 2

Pre- and Posttest Data Obtained From Teacher Questionnaires

Total Number of Teachers-3

Item #	Pretest Data SA	A	D	SD	Posttest Data SA	A	D	SD
1		1	2		1	2		
2			2	1		1	2	
3			2	1		1	2	
4			2	1	1	1	1	
5	1	1	1		2	1		
6	1	1	1		1	2		
7		2	1			2	1	
8		1	2		1	2		
*9		2			1	2		
*10	1		1		2	1		

* = 1 No Response
SA = Strongly Agree
A = Agree
D = Disagree
SD = Strongly Disagree

Table 3

Pre- and Post-Implementation Pragmatics Observations of Hearing-Impaired Students

Total Number of Students - 7

Child	Observation 1	Observation 2
I	45%	75%
II	35%	20%
III	18%	22%
IV	50%	63%
V	50%	75%
VI	12%	53%
VII	42%	50%
Average	37.14%	51.14%

a score on the pragmatics observation form that changed from an average of 37.14% to 51.14%. Of the seven hearing-impaired children observed, six achieved a significantly improved score from pre-implementation to post-implementation observation.

Discussion

Each of the three expected outcomes for this practicum was not achieved to the levels projected at the outset of the project. That is, on the student questionnaire, a 70% score was not achieved by all 92 hearing students; however, a substantial improvement was achieved. Only 11 students achieved a score of 50% or better on pretest, whereas 40 achieved a score of 50% or better on posttest. An examination of individual items on the questionnaire revealed that the hearing students achieved improvement on all but one question. It was felt that providing training to young children in grades one through five spanning a three month time period on a once a month basis only was insufficient to provide adequate carryover and retention. The questionnaire included information learned three months prior to posttest, and some of the students, particularly those in grades one and two, were unable to remember all of the new information. However, the writer and graduate students were encouraged by the obvious improvement in knowledge regarding hearing loss, hearing aids and communication with the hearing-impaired as evidenced by all

but one questionnaire item demonstrating improvement ranging from 18% to 81%.

Another factor which inhibited carryover and retention of the new information was the fact that the hearing-impaired students were mainstreamed just three times per week, for physical education and music, only. The hearing-impaired students were not mainstreamed for any academic subjects, lunch, playground time, or field trips. These times naturally lend themselves to unstructured interaction and development of social relationships. This lack of constant and less structured contact with their hearing peers made social integration extremely difficult and carryover of new skills gained by the hearing-impaired children and the hearing children almost impossible.

The teacher posttest questionnaire showed significant improvement over pretest, but did not indicate the 70% criterion of "strongly agree" as projected at the outset of the practicum. However, when the writer included both the "strongly agree" and "agree" responses, then a 60% criterion was achieved. It was felt that the use of the term "strongly agree" vs. "agree" may have forced the teachers to choose between two responses that were, in essence, indicative of the same rating.

The pragmatics observations accomplished pre- and post-implementation showed an increase in appropriate interactions between the hearing-impaired students and their

hearing classmates, although the increase did not approach the projected outcome of 50% more interactions. The writer felt that the increase was related to providing training in the targeted behaviors during pragmatics groups instruction, and to the use of hearing buddies. However, a three-month implementation was not sufficient to effect the change originally projected. Additionally, the limited amount of time spent by the hearing-impaired children in mainstream activities of only 2 hours per week was insufficient to provide adequate interaction time.

In summary, although each of the three outcomes projected for this practicum were not met to the degree originally anticipated, it was felt that improvement was measured in all three outcome areas. Normal hearing children improved their understanding of hearing loss and its impact on communication. The children demonstrated a sensitivity to hearing-impaired classmates during observations made post-implementation. The mainstream teachers improved their perceptions about hearing-impaired students, and demonstrated consistently appropriate techniques to include the hearing-impaired children in physical education and music activities. Finally, social interactions between hearing-impaired and normal hearing children increased by 14% over initial observation, indicating improvement related to the solution strategies.

Recommendations

1. It is recommended that any replication of this practicum be implemented for a minimum period of nine months.

2. It is recommended that the hearing-impaired students be mainstreamed for activities other than physical education and music only, with strong consideration given to shared playground time, lunch, field trips, and other auditorium events.

3. It is recommended that the hearing-impaired students and their hearing buddies meet on a regular basis for outside activities, which would require strong support from the parents of all of these students in order to foster friendships.

4. It is recommended that sensitivity training related to hearing impairment begin with children at the preschool or early elementary school level during which time the children may be most receptive to new concepts.

5. It is recommended that the pragmatics groups portion of this practicum continue on an ongoing basis in this writer's work setting, and continue to provide aural rehabilitation hours for graduate students in the speech-language masters program.

Dissemination

This practicum will be shared with members of the speech-language masters program faculty at the writer's university in a formal presentation in February, 1994.

The writer will also share the practicum results with the teachers, teacher assistants, and administrators of the special services school which is attended by the hearing-impaired students.

The writer submitted this practicum in a Call for Papers to the annual spring convention of the Florida Speech-Language-Hearing Association meeting, and it was accepted for inclusion as a conference miniseminar to be presented by the writer and two of the speech-language graduate students in May, 1994.

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APPENDIX A

STUDENT QUESTIONNAIRE

Student Questionnaire

1.	I have listened to a hearing aid.	Yes	No	
2.	I have listened to an FM receiver.	Yes	No	
3.	I can understand what the child who wears hearing aids in my class says.	Yes	No	Sometimes
4.	My teacher told me about hearing loss and hearing aids.	Yes	No	
5.	My teacher told me that a student with a hearing aid would be in my class.	Yes	No	
6.	I talk to the student who wears hearing aids.	Yes	No	Sometimes
7.	Children who wear hearing aids talk funny.	Yes	No	
8.	Children who wear hearing aids are not smart.	Yes	No	
9.	I play (interact with) the student who wears hearing aids when I'm out of class.	Yes	No	Sometimes
10.	I know why the Baudhuin School kids who wear hearing aids come to my school.	Yes	No	

APPENDIX B

TEACHER QUESTIONNAIRE

Teacher Questionnaire

This questionnaire is part of a Practicum aimed at more successfully mainstreaming hearing-impaired students from the Baudhuin Oral School into the University School. Please answer each item honestly. Your participation is greatly appreciated.

1. I have been adequately prepared to receive a hearing-impaired student into my class.

Strongly Agree Agree Disagree Strongly Disagree

2. I understand and can assist in the operation of a hearing aid.

Strongly Agree Agree Disagree Strongly Disagree

3. I understand and can operate an FM transmitter.

Strongly Agree Agree Disagree Strongly Disagree

4. I have read and understood the hearing-impaired student's audiogram and report.

Strongly Agree Agree Disagree Strongly Disagree

5. I understand the implications of hearing loss on communication.

Strongly Agree Agree Disagree Strongly Disagree

6. I have talked to the other children in the class about the inclusion of the hearing impaired student(s) in my class.

Strongly Agree Agree Disagree Strongly Disagree

7. I can understand the hearing impaired student(s)' speech.

Strongly Agree Agree Disagree Strongly Disagree

8. I feel that I have the technical ability to teach a hearing-impaired child.

Strongly Agree Agree Disagree Strongly Disagree

9. The hearing-impaired children in my class are socially accepted by their hearing peers.

Strongly Agree Agree Disagree Strongly Disagree

10. The hearing-impaired children in my class have the same cognitive ability to learn as the hearing children.

Strongly Agree Agree Disagree Strongly Disagree

APPENDIX C

PRAGMATICS OBSERVATION FORM

NAME: _____
DATE: _____

PRAGMATICS OBSERVATION

I. To increase the adequacy of affect pragmatics
   1. Establishes eye and facial contact _____
   2. Adjusts language to register of the speaker _____
   3. Understands parameters of personal space _____
   4. Facial expressions/gestures & body posture match spoken communication _____
   5. Suprasegmentals commensurate with conversational content _____

II. To increase spoken linguistic skills
   1. Topic selection/appropriateness & relevancy _____
   2. Initiates & terminates a conversation _____
   3. Topic maintenance _____
   4. Topic shifts _____
   5. Uses conversational turn taking with appropriate interjections _____

III. To increase the ability to convey information utilizing spoken language.
   1. Asks and answers questions _____
   2. Gives and follows directions _____
   3. Provides sufficient information _____
   4. Requests information for clarification/repair _____
   5. Sequences information _____

IV. To increase the ability to use language effectively in a variety of situations
   1. Uses language to tell a story _____
   2. Uses language to pretend _____
   3. Uses language to verbalize a problem _____
   4. Uses language to predict an outcome _____
   5. Uses language to express needs & feelings _____

ADDITIONAL BEHAVIORS OBSERVED:

Response		Percentage of Occurrence
3	Appropriate response-skill intact	80 - 100%
2	Emerging appropriate response	50 - 79%
1	Inconsistent response	0 - 49%
0	No opportunity to observe	

APPENDIX D

INFORMED CONSENT FORM FOR HEARING-IMPAIRED STUDENTS

Informed Consent Form

for Hearing-Impaired Students

PROMOTING SUCCESSFUL MAINSTREAM EXPERIENCES FOR HEARING-IMPAIRED STUDENTS THROUGH INSERVICE TRAINING, PEER MENTORING, AND PRAGMATICS GROUPS

PURPOSE: The purpose of this project is to improve teacher and student sensitivity to the mainstreamed hearing-impaired children, and to design and implement a program for mainstreaming that will foster acceptance of the mainstreamed hearing-impaired student. It is hoped that this practicum will help the hearing-impaired students to achieve a more comfortable transition from the special services school to the mainstream school activities, and to help the hearing and hearing-impaired students interact more socially during mainstream activities.

PROCEDURE: Your child will be seen in a group situation on a once a week basis for thirty minutes by the audiologist and a graduate student in speech-language pathology. The purpose of these meetings in to teach the hearing-impaired students about pragmatics, or the best way to communicate socially in the mainstream setting.

Your child will also be assigned a "hearing buddy" in the mainstream activity for the three month time period. This hearing classmate will be your child's helper, if he/she has difficulty hearing or understanding the teacher or the other children.

(Other parts of the project will address inservice training for the teachers and the hearing students about hearing loss, hearing aids, etc., and a once monthly parent support meeting.)

RISKS: There are no anticipated health or social or legal risks to your child for participating.

CONFIDENTIALITY: Your child's participation in this practicum is confidential to the extent permitted by law. Names will not be used in the reporting of the information. The results will be reported as group results to protect your child's identity.

PARTICIPATION IS VOLUNTARY: Your participation in this practicum is voluntary. You may withdraw from the project at any time. You are free to ask questions about this project at any time. The writer is Barbara Packer, M.S. CCC (A), Coordinator of Audiology and Aural Rehabilitation. She can be reached at (305) 452-1474.

"I (we) understand the explanation of the Hearing-Impaired Mainstream practicum as described above. I (we) voluntarily consent to participate in this project."

_____

Name of Participant

_____

Parent or Guardian Name(s) if appropriate

_____

Signatures

_____

Date

APPENDIX E

INFORMED CONSENT FORM FOR HEARING BUDDIES

Informed Consent Form

for Hearing Buddies

PROMOTING SUCCESSFUL MAINSTREAM EXPERIENCES FOR HEARING-IMPAIRED STUDENTS THROUGH INSERVICE TRAINING, PEER MENTORING, AND PRAGMATICS GROUPS

PURPOSE: The purpose of this project is to improve teacher and student sensitivity to the mainstreamed hearing-impaired children, and to design and implement a program for mainstreaming that will foster acceptance of the mainstreamed hearing-impaired student. It is hoped that this practicum will help the hearing-impaired students to achieve a more comfortable transition from the special services school to the mainstream school activities, and to help the hearing and hearing-impaired students interact more socially during mainstream activities.

PROCEDURE: Your child will be assigned to a hearing-impaired child during non-academic mainstream activities, such as physical education, art, or music, for a three month time period to include September, October, and November, 1993. Your child will be a "helper" to the hearing-impaired child, if he/she has difficulty hearing or understanding the teacher or another classmate. Your child will also be asked to participate in one thirty minute "rap" session with the other hearing "buddies" on a once a month basis in September, October, and November, 1993. These activities will not interfere with your child's academic class time, and will not interfere with their non-academic class projects.

(Other parts of the project will address inservice training for the teachers and the hearing students about hearing loss, hearing aids, etc., a once monthly parent support meeting (for parents of hearing-impaired students), and weekly therapy sessions with the hearing-impaired students).

RISKS: There are no anticipated health or social or legal risks to your child for participating.

CONFIDENTIALITY: Your child's participation in this practicum is confidential to the extent permitted by law. Names will not be used in the reporting of the information. The results will be reported as group results to protect your child's identity.

PARTICIPATION IS VOLUNTARY: Your participation in this practicum is voluntary. You may withdraw from the project at any time. You are free to ask questions about this project at any time. The writer is Barbara Packer, M.S. CCC (A), Coordinator of Audiology and Aural Rehabilitation. She can be reached at (305) 452-1474.

"I (we) understand the explanation of the Hearing-Impaired Mainstream practicum as described above. I (we) voluntarily consent to participate in this project."

_____

Name of Participant

_____

Parent or Guardian Name(s) if appropriate

_____

Signatures

_____

Date

APPENDIX F

PRAGMATICS GROUP I

PRAGMATICS GROUP I

I. IDENTIFYING INFORMATION

Participants: Dates of Birth:
03/15/87
10/10/84
05/02/86
Period of Pragmatics Group: 09/20/93 - 12/14/93
Graduate Students:
Supervisor: Barbara Packer, M.S. CCC (A)
Date of Report: 12/13/93
Current Diagnosis: Hearing Impairment

II. PERTINENT INFORMATION

, a 6 year, 3 month old female, presently attends first grade in Mrs. 's class at the School. was diagnosed with a profound hearing loss at 10 months of age and was first fitted with hearing aids at 13 months old. presents with a profound, bilateral, sensorineural hearing loss. She wears Oticon E39PL behind the ear hearing aids coupled to full shell earmolds, bilaterally.

, a 9 year, 10 month old female, is presently in the second grade in Mrs. 's class at the School. was diagnosed with a hearing loss at 4 months of age, and was first fitted with hearing aids at 18 months old. presents with a mild to moderate bilateral, sensorineural hearing loss in her left ear with her hearing aid and hears within normal limits in her right ear with her hearing aid. She wears a Unitron UM 60H in her right ear and a Unitron UM 60PP aid in her left ear, coupled to full shell earmolds, bilaterally.

, a 7 year, 5 month old male, currently attends Mrs. 's second grade class at the School. was diagnosed with a profound hearing loss at 10 months of age, and was then fitted with hearing aids. presents with a severe to profound, bilateral sensorineural hearing loss. He wears Oticon E38P hearing aids coupled to full shel earmolds, bilaterally.

Each child is mainstreamed at the School for physical education (twice weekly) and for music classes (once weekly). The purpose of the pragmatics group was to faciliate the mainstreaming process.

III. THERAPY SUMMARY

Long Term Goal: Each child will demonstrate improvement in their pragmatics skills by developing the following objectives:

Objective One:
Establish eye contact, facial contact and understand personal space issues. The following materials were used in structured activities:

1. Twister Game
2. Simon Says game
3. Picture cards

Objective Two:
Establish appropriate facial expressions, gestures and body posture matching spoken communication. The following materials were used in structured activities:

1. Picture cards
2. Shaving cream activity
3. Drawing
4. Simon Says
5. Role playing

Objective Three:
Adjust language to the level (register) of the speaker, and use of appropriate and relevant topic. The following materials were used in structured activities:

1. Role playing
2. Picture cards

Objective Four:
Establish use of conversational turn-taking with appropriate interjections. The following materials were used in structured activities:

1. Board games
2. Bowling game
3. Art projects (pumpkins)
4. Simon Says Game
5. Twister Game

Objective Five:
Use of asking and answering questions. The following materials were used in structured activities:

1. List of questions (eg. "Hi, how are you?"; "What did you do this weekend?"; "What is your phone number?") Questions were distributed to various people in the school and clinic to ask the children.

Objective Six:
Giving and following directions along with providing sufficient information. The following materials were used in structured activities:

1. Art projects
2. Drawing and coloring activities.

Objective Seven:
Ability to sequence information appropriately. The following materials were used in structured activities:

1. Sequence cards
2. Objects that were contained in cards (eg. popcorn, popcorn maker, and bowl)

Objective Eight:
Use of language to verbalize a problem and predict an outcome. The following materials were used in a structured activity:

1. Pictures with items left out.

IV. SUMMARY

The following objectives showed significant improvement: Objectives One, Two and Seven. Each child demonstrated appropriate eye contact and understood personal space. is known to be shy, and at times, showed difficulty demonstrating eye contact. All of the children were able to understand facial expressions shown and match those with specific body postures and gestures made (eg. a tired person who looked slouched over with droopy eyes). Also, each child was able to sequence a story or script given.

Each child showed minimal improvement in Objectives Three, Four and Five. The children inconsistently demonstrated use of conversational turn-taking with appropriate interjections. At times, they would speak or give answers when it was not their turn to do so. Each child exhibited the ability to adjust to the level of the speaker with modeling and cueing examples provided by the clinician. Each child demonstrated appropriate use of answering questions; however, in situations out of the therapy room, this behavior was inconsistent.

Slight improvement was shown in Objective Six. Each child was able to give and follow directions. However, little change was shown with following directions. Due to time constraints, Objective Eight and activities addressing asking questions were not thoroughly addressed.

A formal structured home program was not set up, but the clinicians sent home suggestions following sessions of activities to improve carryover of targeted goals.

V. RECOMMENDATIONS

1. Continue pragmatics group intervention once a week for 30-minute group sessions. Pragmatics groups should focus on the following:

a. Work on structured activities to facilitate the above gaols, using the School and Institute in and out of the terapy room tasks to incorporate carryover.

b. Implement a structured home and classroom program to facilitate carryover of session goals.

APPENDIX G

PRAGMATICS GROUP II

PRAGMATICS GROUP II

Identifying Information:

Clients' Names:

D.O.B.: 2/1/85 Age: 8-10
D.O.B.: 4/23/84 Age: 9-8
D.O.B.: 1/24/83 Age: 10-11

Period of Therapy: 9/21/93 to 12/7/93
Date of Report: 12/15/93
Current Diagnosis: Hearing-Impaired

Pertinent Information:

, and currently attend the School, where they are placed in classrooms for children with varying exceptionalities. They are also mainstreamed into the University Lower School for Physical Education (twice weekly) and Music (once weekly). has a profound sensori-neural hearing loss, has a severe to profound sensori-neural hearing loss, and has a severe to profound sensori-neural hearing loss. All three children are bilaterally aided with powerful behind-the-ear hearing aids. Additionally, uses a transformer hearing aid system in the classroom.

, and have been receiving group therapy for 30 minute sessions once weekly since 9/21/93. They each also receive individual speech-language therpay using an auditory-oral approach. The focus of the group therapy has been to improve pragmatic skills. These sessions were held as part of a doctoral practicum project conducted by Mrs. Barbara Packer, M.S., CCC-A. This project is intended to improve the children's mainstreaming experiences. Additional activities were conducted as follows:

-two parent meetings to discuss progress and concerns
-hearing buddies were assigned to the hearing-impaired children to assist them during mainstreamed activities

-three in-services were provided to the teachers and non-hearing-impaired children at the University Lower School (in the mainstreaming classrooms)
-the hearing-impaired children were observed a minimum of three times in their mainstream environments

Therapy Goals:

Long Term Goal:

1. To improve pragmatic skills for the purpose of increasing the effectiveness and appropriateness of social interactions

Short Term Goals:

1. Establishing eye and facial contact and personal space issues
2. Matching facial expressions, gestures and body posture to spoken communication
3. Adjusting language to the register of the speaker and choice of appropriate and relevant topic
4. Initiating, maintaining and terminating a conversation
5. Using appropriate touching/calling to gain another's attention and listening for one's own name
6. Using appropriate voice/volume in conversational settings
7. Using conversational turn-taking with appropriate interjections
8. Asking and answering questions
9. Requesting information for clarification/repair
10. Giving and following directions and providing sufficient information

Therapy Summary:

Significant improvement was noted for all three children in the following areas:
-eye and facial contact
-gestures and body posture matching verbal message
-initiating and maintaining a conversation
-conversational turn-taking with appropriate interjections
-asking and answering questions
-requesting information for clarification and repair

Although improvement was noted for all three children in the following areas, the use of these skills, both in therapy and in carryover situations, was inconsistent:

-personal space issues
-adjusting language to the register of the speaker
-choice of appropriate and relevant topic
-terminating a conversation
-appropriate touching/calling to gain attention
-listening for one's own name
-appropriate voice/volume in conversational settings
-giving and following directions and providing sufficient information

Recommendations:

1. , and should continue group therapy once weekly for 30 minute sessions. Therapy should focus on:

   a. Reinforcing skills for which significant improvement was noted (see Therapy Summary)
   b. Continuing activities related to skills used inconsistently (see Therapy Summary)
   c. Introducing new pragmatic skills as appropriate
   d. Providing supervised opportunities for carryover of emerging skills

APPENDIX H

PRAGMATICS GROUP III

PRAGMATICS GROUP III

I. **IDENTIFYING INFORMATION:**

Clients' Names:

D.O.B.: 10/08/83 Age: 10 years 2 months
D.O.B.: 01/20/80 Age: 13 years 11 months
D.O.B.: 11/10/80 Age: 12 years 11 months

Period of Therapy: 09/20/93-12/07/93
Date of Report: 12/17/93
Current Diagnosis: Hearing Impaired

II. **PERTINENT INFORMATION:**

, a 10 year, 2 month old male, is currently enrolled in the fifth grade at the School. He is mainstreamed into the University Lower School for Physical Education and Music.

has been diagnosed with a severe to profound sensorineural hearing loss in his left ear and a high frequency sensorineural hearing loss in his right ear. He currently wears a behind the ear (BTE) aid in his left ear.

, a 13 year, 11 month old female, is currently enrolled in the sixth grade at the School. She is mainstreamed into the University Upper School for Physical Education.

has been diagnosed with a severe to mild mixed hearing loss bilaterally, with the left ear being better than the right. is binaurally aided with Bernafon behind the ear (BTE) aids. She receives individual speech-language therapy at the Institute for Hearing, Speech, and Language.

, a 12 year, 11 month old female, is currently enrolled in the seventh grade at the School. She is mainstreamed into the University Upper School for Physical Education.

has been diagnosed with a severe bilateral

Phonak Pico Forte behind the ear (BTE) aids. receives individual speech-language therapy at the Institute for Hearing, Speech, and Language.

, , and have been receiving group therapy once weekly for thirty minute sessions. As part of a doctoral practicum project conducted by Mrs. Barbara Packer, M.S., CCC-A., these sessions focused on improving pragmatic skills so that the children's mainstreaming experiences would be improved. In addition to the group therapy sessions the following activities were also conducted:

1. Two parent meetings to discuss progress and concerns.
2. A hearing buddy was assigned to to assist him during mainstreamed activities.
3. Three in-services were provided to the teachers and non-hearing impaired children at the University Lower School.
4. was observed a minimum of three times in his mainstream environments.

III. THERAPY GOALS:

Long Term Goal:

1. To improve pragmatic skills for the purpose of increasing the effectiveness and appropriateness of social interactions.

Short Term Goals:

1. Establishing eye and facial contact and personal space issues.
2. Matching facial expressions, gestures and body posture to spoken communication.
3. Adjusting language to the register of the speaker and choice of appropriate and relevant topic.
4. Initiating, maintaining, and terminating a conversation.
5. Making appropriate topic shifts in conversation.
6. Use of conversational turn-taking with appropriate interjections.
7. Asking and answering questions.
8. Giving and following directions and providing sufficient information.
9. Sequencing information.
10. Requesting information for clarification and repair.

IV. THERAPY SUMMARY:

, , and , as a group, were extremely difficult to motivate. Group attendance was sporadic throughout the three month therapy period due to individual illness and in-school activities. Participation was occasionally achieved when activities involved group discussion and role playing with the integration of topics that were of interest to them, i.e., cars, sports, and favorite television shows.

, , and showed significant progress in the following areas:

a. eye and facial contact
b. gestures and body posture matching spoken communication
c. initiating and maintaining a conversation
d. asking and answering questions
e. sequencing information

, , and showed inconsistent use of the following skills in therapy and in carryover situations:

a. personal space issues
b. adjusting language to the register of the speaker
c. choice of appropriate and relevant topic
d. conversational turn-taking with appropriate interjections
e. making appropriate topic shifts
f. requesting information for clarification and repair
g. terminating a conversation
h. giving and following directions and providing sufficient information

V. RECOMMENDATIONS:

1. Due to lack of motivation within the group and the demand on time for in-class academics, , , and should discontinue group therapy.
2. Pragmatic skills should be incorporated into the individual therapy sessions of and .
3. Pragmatic skills should be reinforced in their classroom and home settings.